

dynamic foot pressure measurement

Dynamic foot pressure measurement (pedography, electropedography) is an electronic measurement of the feet that serves both static and dynamic pressure distribution under the soles and gait analysis.

Especially specific complaints or pain in the area of the foot are often not sufficiently recorded in clinical observation and in conventional gait analysis, so that pedography is necessary.

Indications (areas of application)

- Reviews of orthopaedic technical supplies
- Diabetic foot - recording diabetic neuropathy (damage to the nerves in the feet caused by diabetes mellitus) by characterizing gait disorders and abnormal loads.
- Rheumatic diseases - when the feet are affected
- Foot malpositions - Pes transversus (splayfoot), Pes equinus (pointed foot), Pes planus (flat foot), Pes valgus (bent foot), Pes cavus (hollow foot)
- Hallux valgus - deviation of the big toe, so-called oblique toe
- Pes equinovarus (clubfoot)
- Therapy control - e.g. after operations on the foot
- incorrect loads
- Metatarsal and metatarsal fractures - Fractures of the midfoot and back of the foot
- unspecific orthopedic changes

The procedure

Pedography is a computer-aided procedure that can precisely measure the pressure distribution of the soles of the feet in particular. The measuring systems are able to resolve the pressures temporally and locally and thus assign the load characteristics to the respective foot regions and skeletal elements.

The patient moves barefoot on a pressure distribution measuring plate. This plate is equipped with 4096 sensor points which measure with a frequency of 20 Hz. The pressure distribution pattern is displayed directly on a screen, with different pressure levels assigned to different colors.

The patient should move over the measuring plate as naturally as possible to avoid step adjustments.

Pedography records the following measurement parameters both when standing and walking:

- Peak pressures
- Time of peak pressures
- Local contact areas and relative impulses
- load duration
- Pressure distribution - especially during the unrolling process
- mean contact pressure

This is particularly important in the field of orthopaedic shoe technology for the evaluation of insoles and shoe adjustments. In addition, the system can be used flexibly under natural, everyday conditions.

Your benefit

Pedography is an established procedure and represents a valuable addition, especially in the diagnosis and early detection of diabetic feet.

In most cases, the system is used for the manufacture of individual orthopaedic insoles.

In addition to determining the pressure conditions, other criteria are also important:

- Influencing the rolling behaviour
- Relief of congestion regions
- Influence of muscle pulls
- Activation of musculature
- performance promotion
- Support of joint functions
- Choice of insole materials for certain purposes and consideration of the footwear used (occupation - work shoes / sports - sports shoes / daily normal use - street shoes / domestic use - slippers / special productions - sandals, Valinos)

The transmission of the measured data package, as well as the medical diagnoses and orders takes place via Internet to the manufacturing company. There your insole will be manufactured directly with a specially developed CAD technology.

